

**A NEW SPECIES OF *IONOLYCE TOXOPEUS* FROM THE  
SOLOMON ISLANDS (SANTA CRUZ GROUP) AND VANUATU  
(LEPIDOPTERA: LYCAENIDAE)**

W. JOHN TENNENT

*Biogeography and Conservation Laboratory, Department of Entomology, The Natural History  
Museum, London SW7 5BD, UK*

*(address for correspondence: 38 Colin McLean Road, Dereham, Norfolk NR19 2RY, England)*

**Abstract**

*Ionolyce lachlani* sp. nov. is described from islands of the Santa Cruz group (Solomon Islands) and Vanuatu.

**Introduction**

The genus *Ionolyce* Toxopeus was first reported as occurring in Vanuatu by Gross (1975) who reported '*Ionolyce* sp. nov.' from the island of Espiritu Santo following the Royal Society / Percy Sladen New Hebrides Expedition of 1971. Samson (1983) subsequently noted a species close to *I. helicon* (C. Felder) from the island of Efaté. A series of both sexes of a species of *Ionolyce* was seen in the collection of Rob Lachlan, Queensland, and a further series of both sexes of the same species was taken by the author on islands of the Santa Cruz group (Solomon Islands) and on several islands of Vanuatu, in 2000. This combined material represents a new taxon.

***Ionolyce lachlani* sp. nov.**

(Figs 1-5)

*Types. Holotype* ♂, SOLOMON ISLANDS: Santa Cruz group, Nendo Island, south-west central, forestry camp, 140-160 m, 28.iv.2000, W.J. Tennent (in The Natural History Museum, London [BMNH]). *Paratypes*: 7 ♂♂, 4 ♀♀, same data as holotype (including ♂ gen. preps BMNH(V) 5970 & 5971); 9 ♂♂, 2 ♀♀, same locality, 29.iii.2000; 1♀, Nendo Island, 0-5 km south of Lata, 60-140 m, 19.iii.2000, W.J. Tennent; 1 ♀, Nendo Island, Lata, 60 m, 14.v.2000, W.J. Tennent; 2 ♂♂, Nendo Island, Lata to Noipe, 60-140 m, 3.v.2000, W.J. Tennent; 1 ♂, same locality, 6.v.2000; 3 ♂♂, 2 ♀♀, same locality, 9.v.2000; 1 ♂, 2 ♀♀, Santa Cruz group, Reef Islands, Lomlom Island, paths and gardens between Otelo and Nnganiwo school, SL, 30.iii.2000; 1 ♂, Santa Cruz group, Vanikoro, main island, Lale village, SL, 6.iv.2000, W.J. Tennent (all BMNH). VANUATU: *Paratypes*: 3 ♂♂, 1 ♀, Torres group, Loh Island, between Lunghariki and Rinuha villages, SL-20 m, 3.ix.2000, W.J. Tennent; 1 ♂, same locality, 4.ix.2000 (gen. prep. BMNH(V) 5972); 1 ♂, same locality, 6.ix.2000; 1 ♂, same locality, 7.ix.2000 (gen. prep. BMNH(V) 5973); 1 ♂, same locality, 8.ix.2000; 1 ♂, 1 ♀, Malakula, north-east coast, ca 2-8 km north-west of Lakatoro, 20-60 m, 28.viii.2000, W.J. Tennent (all BMNH); 1 ♂, Torres group, Toga Island, 18.xii.1987, R.B. Lachlan (gen. prep. JT621); 1 ♂, Espiritu Santo, Port Olry, 1.i.1988, R.B. Lachlan; 1 ♂, 1 ♀, same locality, 5.i.1988; 1♀, Espiritu Santo, Luganville, 15.xii.1987, R.B. Lachlan; 1 ♂, 1 ♀, Espiritu Santo, 7 km north east of Luganville, 16.xii.1988, R.B. Lachlan; 2 ♂♂, same locality, 27.xii.1987; 1 ♂, Ambrym, north, Olal, Catholic mission, 5.i.1989, R.B. Lachlan; 2 ♂♂, 1 ♀, same locality, 21.ix.1989 (including ♂ gen. prep. JT622) (all R.B. Lachlan collection).

*Description.* Male (Figs 1-2) with forewing length 12 mm; resembles *I. helicon* (populations from the Bismarck archipelago); generally smaller; upperside dark purple-blue in fresh specimens, fading to dull brownish blue when worn; upperside scales with 'rough' appearance over much of the wings; wing fringes brown; hindwing tail long, slender, tipped white; underside ground colour more grey than *I. helicon*; hindwing subternal spot large, suffused iridescent green distally (more extensive than *I. helicon*) and dull orange on other three sides. Underside markings variable, probably indistinguishable from *I. helicon* (underside of *helicon* populations from mainland Australia brown, white lines less prominent).

Male genitalia (Fig. 5) similar to those of *I. helicon*; aedeagus large; valve with ventral spine long, curved (shorter, less curved in *I. helicon*); distal edge significantly indented, forming blunt 'lobe' (distal edge more linear, lobe only slightly defined in *I. helicon*); filamentous spines long, numerous.

Female (Figs 3-4) upperside superficially similar to *I. helicon hyllus* (Waterhouse & Lyell) from mainland Australia; ground colour dark grey (paler and more brown in *I. helicon*); upperside blue darker, more extensive, parameters more clearly defined; hindwing subternal spot large, submarginal white chevron-shaped markings well developed; underside similar to male; subternal spot large, prominent.

*Etymology.* This new species is named after Rob Lachlan, Queensland, Australia.

*Distribution.* Solomon Islands (Reef Islands [Lomlom]; Nendo; Vanikoro) and Vanuatu (Torres Islands [Loh, Toga]; Malakula; Ambrym; Efate [Samson, 1983]; Espirito Santo).

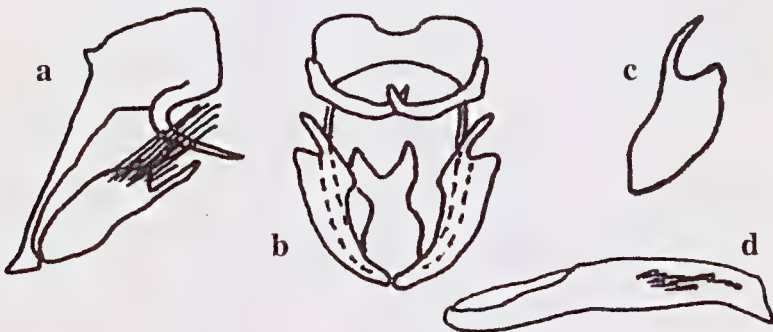
## Discussion

Including *I. lachlani*, the genus *Ionolyce* contains four species, two of which (*I. brunnescens* Tite and *I. selkon* Parsons) are apparently confined to the Solomons archipelago. A third species, *I. helicon*, occurs as eight described subspecies, from Sri Lanka in the west to Papua New Guinea, mainland Australia and the western islands of the Solomons archipelago in the east. The new taxon is the easternmost representative of the genus and is described from the New Hebrides archipelago.

*Ionolyce lachlani* bears a superficial resemblance to both *I. helicon caracalla* (Waterhouse & Lyell), which occurs in Papua New Guinea and the western Solomons archipelago and *I. helicon hyllus*, which is endemic to northeastern Australia. Although the new taxon shares some morphological features with both these subspecies, differences in the genital armature of the male, combined with morphological differences cited in the description, suggest a new species. The shape of the valve is transitional to *I. brunnescens* (Tite 1963).



**Figs 1-4.** *Ionolyce lachlani* sp. nov. (1-2) male holotype: (1) upperside, (2) underside; (3-4) female paratype: (3) upperside, (4) underside.



**Fig. 5.** *Ionolyce lachlani* sp. nov. Male genitalia: (a) genitalia (lateral view, aedeagus removed); (b) genitalia (posterior view); (c) left valva (lateral view, spines removed); (d) aedeagus (lateral view).

### Acknowledgments

Thanks are due to the Government of the Solomon Islands for continuing to support the author's field work, and to Mr Ernest Bani, Environment Unit, Government of Vanuatu, for supporting a preliminary research visit to Vanuatu. Thanks are also due to Rob Lachlan (Queensland), for access to his comprehensive private collection of Vanuatu butterflies. The author's field work in the Santa Cruz group of islands was partially funded by the Godman Exploration Fund (BMNH) and the Percy Sladen Fund (Linnean Society of London).

### References

- GROSS, G.F. 1975. The land invertebrates of the New Hebrides and their relationships. *Philosophical Transactions of the Royal Society of London* **272**: 391-421.
- SAMSON, C. 1983. Butterflies (Lepidoptera: Rhopalocera) of Vanuatu. *Naika, Journal of the Vanuatu Natural Science Society* **10**: 2-6.
- TITE, G.E. 1963. A synonymic list of the genus *Nacaduba* and allied genera (Lepidoptera: Lycaenidae), *Bulletin of the British Museum (Natural History), Entomology* **13**(4): 67-116.